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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/976,426	10/12/2001	Darren Kenneth Rogers	1482(Touchstone)	1151
48642	7590	08/02/2006	EXAMINER	
PHILIP D. LANE P.O. BOX 79318 CHARLOTTE, NC 28271-7063			VO, HAI	
			ART UNIT	PAPER NUMBER

1771

DATE MAILED: 08/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/976,426	ROGERS, DARREN KENNETH	
	Examiner	Art Unit	
	Hai Vo	1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-11 and 25-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-11 and 25-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. All of the art rejections and the double patenting rejections have been withdrawn in view of present amendment and response. However, upon further consideration, new grounds of rejections are made in view of JP 09-087057.

Drawings

2. The drawings were received on 05/23/2006. These drawings are acceptable.

Claim Objections

3. Claims 29-37 are objected to because of the following informalities: In claims 29 and 32, the term "a" is preferably added before --carbon foam-- to conform with US Patent Practice. Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 29-33, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCullough, Jr. et al (US 4,999,385) in view of JP 09-087057. McCullough teaches a flame retardant article suitable as an electrical shielding or a fire barrier comprising a carbon foam having a resistivity from 10 to 10³hm-cm and a density from 0.25 to 12 pcf within the claimed ranges (column 4, lines 20-23 and 50-51). Likewise, it is

clearly apparent that the carbon foam would inherently be formed on or connected to a body and protect the body from the damage due to electromagnetic waves or heat of flames. McCullough does not specifically disclose an electrical resistivity. JP'057 teaches a wave absorber having a dielectric constant from 2 to 8 (abstract, paragraph "Effect of the invention" at page 7). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the electrical shielding of McCullough having a dielectric constant as taught by JP'057 because it has been shown in the art that such is an acceptable range for a dielectric constant of the electrical shielding.

6. Claims 9, 25-34, 36 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 09-087057 in view of McCullough, Jr. et al (US 4,999,385). JP'057 teaches a wave absorber comprising a carbonaceous foam having a dielectric constant and density within the claimed ranges (abstract, paragraph "Effect of the invention" at page 7). Likewise, it is clearly apparent that the carbon foam would inherently be formed on or connected to a body and protect the body from the damage due to electromagnetic waves. JP'057 discloses the carbonaceous foam comprising 40 to 370 parts by weight of a bulking agent and 100 parts by weight of the resins (paragraph 25). JP'057 discloses that the bulking agent includes charcoal powders (paragraph 21). None of the working samples disclose an electrical resistivity in the range instantly claimed. However, JP'057 teaches an electrical resistivity can be modified as

dependent upon the specific applications of the foam (paragraph 38).

McCullough teaches a flame retardant article suitable as an electrical shielding comprising a carbon foam could have an electrical resistivity of 10 ohm-cm (column 7, lines 10-12). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the carbon foam having an electrical resistivity of 10 ohm-cm because as shown in the art it is possible and acceptable for the wave absorbers to have an electrical resistivity of 10 ohm-cm.

JP '057 does not specifically disclose the processing steps as set forth in the claims. However, it is a product-by-process limitation not as yet shown to produce a patentably distinct article. It is the examiner's position that the article of JP'057 as modified by McCullough is identical to or only slightly different than the claimed article prepared by the method of the claim, because both articles are formed from the same materials, having structural similarity as discussed above. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or an obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985). The burden has been shifted to the applicant to show unobvious differences between the claimed product and the prior art product. *In re*

Marosi, 218 USPQ 289,291 (Fed. Cir. 1983). It is noted that if the applicant intends to rely on Examples in the specification or in a submitted Declaration to show non-obviousness, the applicant should clearly state how the Examples of the present invention are commensurate in scope with the claims and how the Comparative Examples are commensurate in scope with JP'057 as modified by McCullough.

7. Claims 10, 11, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 09-087057 in view of McCullough, Jr. et al (US 4,999,385) as applied to claims 9 and 34 above, further in view of Rogers et al (US 6,656,238). JP'057 discloses the carbonaceous foam comprising 40 to 370 parts by weight of a bulking agent and 100 parts by weight of the resins (paragraph 25). JP'057 discloses that the bulking agent includes charcoal powders (paragraph 21). JP'057 does not teach charcoal powders having a free swell index from 3.75 to 4.5. Rogers, however, teaches a carbon foam made from a particulate coal having a free swell index from 3.75 to 4.5. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the charcoal powder having a free swell index in the range instantly claimed motivated by the desire to obtain the carbon foam with highest compressive strength and lowest foam density.

Response to Arguments

8. The double patenting rejections and art rejections over Rogers et al (US 6,656,238) have been withdrawn for the following reasons. Rogers

teaches a green foam having been carbonized at a temperature from 800°C to about 1200°C for one hour to three hours (column 5, lines 55-60). In accordance with the specification of the present invention, the carbon foam is heat treated in a relatively narrow range from 600°C to about 800°C for 2 to 30 mins to get a claimed combination of electrical resistivity and dielectric constant. Rogers does not teach the specific treatment as set forth in the claims, so there is no basis for the Rogers carbon foam to inherently attain the claimed combination of electrical resistivity and dielectric constant.

9. The art rejections over Stiller et al (US 5,888,469) have been withdrawn for the following reasons. Stiller teaches a green foam having been carbonized at a temperature from 975°C to about 1025°C. In accordance with the specification of the present invention, the green foam is heat treated in a relatively narrow range from 600°C to about 800°C for 2 to 30 mins to get a claimed combination of electrical resistivity and dielectric constant. Stiller does not teach the specific treatment as set forth in the claims, so there is no basis for the Stiller carbon foam to inherently attain the claimed combination of electrical resistivity and dielectric constant.
10. The art rejections over Klett et al (US 6,673,328) have been withdrawn for the following reasons. Klett teaches the green foam having been carbonized at a temperature about 1025°C. In accordance with the specification of the present invention, the carbon foam is heat treated in a relatively narrow range from 600°C to about 800°C for 2 to 30 mins to get

- a claimed combination of electrical resistivity and dielectric constant. Klett does not teach the specific treatment as set forth in the claims, so there is no basis for the Klett carbon foam to inherently attain the claimed combination of electrical resistivity and dielectric constant.
11. The art rejections over McCullough, Jr. et al (US 4,999,385) have been withdrawn in view of the present arguments. As pointed out by Applicant, since an electrical resistivity is unrelated to a dielectric constant, a claimed dielectric constant would not be necessarily present from the teachings of McCullough.
12. The double patenting rejections over the US Patent No. 6,833,011 and US Patent No. 6,814,765 separately have been withdrawn in view of the present amendment and arguments. The examiner notes that US 6,833,011 and US 6,814,765 both teach the carbonization of the green foam at the temperature from 600 to 1600°C for one hour to three hours. As previously discussed, the carbon foam is heat treated in a relatively narrow range from 600°C to about 800°C for 2 to 30 mins to get a claimed combination of electrical resistivity and dielectric constant in accordance with the present invention. Therefore, it is not necessary for the carbon foam materials of US 6,833,011 and US 6,814,765 to attain the claimed dielectric constant and electrical resistivity in accordance with the teachings of the patents.

Conclusion

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13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Vo whose telephone number is (571) 272-1485. The examiner can normally be reached on Monday through Thursday, from 9:00 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HV


HAI VO
PRIMARY EXAMINER